

# Work Order ID 72637

Wednesday, August 03, 2011 12:53:02 PM



Page 1

Item ID: D2580-1

Accept



Setup Start



Revision ID:

Item Name: 205 Skidtube bent detail

Stop



Start Date: 8/3/2011 Start Qty: 2.00



Cust Item ID:

Required Date: 8/10/2011 Req'd Qty: 2.00



Customer:

Reference:

Approvals:

Process Plan:

11

Date:

11-08-3

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2580

RevD DEO-D1

100

0.00



Skidtubes

Memo

0.00

Skidtubes

1- Inspect mat'l D2500-1-190 for damage.

2-Drill pilot holes using drill jig DT 8149 (Do not use cutting fluid)

3-Open holes to 0.500" as per Dwg D2580 without cutting fluid

4-Deburr holes per QSI002 section 4.2.3 and blow out all chips from inside of tube

5- Chemical Conversion Coat as per QSI 005 4.1

6-Bond web in place per QSI 015.

□□

A/R Sikaflex-291 batch: ~~M117516~~ M117516

Sikaflex expire date: ~~12-31-15~~

Start time and date: ~~8-08-18~~ bond for 12hrs

4630

11-08-22

SAD 11-08-18

22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
101 	QC6- Inspect dimensions to drawing	0.00				2	0		BE11/08/29
QC Quality Control	Memo	0.00							
130 	QC3- Inspect Part Finish	0.00				2	0		BE11/08/29
QC Quality Control	Memo	0.00							
140 	Identify as per dwg & Stock Location: <u>LG</u>	0.00				2	0		BE11/08/29
Packaging Packaging	Memo	0.00							

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Revision ID:

Stop



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Start Date: 8/3/2011 Start Qty: 2.00



Cust Item ID:

Required Date: 8/10/2011 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/8/29 [Signature]  
MF  
11-08-29

**Dart Aerospace Ltd**

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# Picklist Print

Wednesday, August 03, 2011 12:53:07 PM

Page 1

Work Order ID: 72637

Parent Item: D2580-1

Parent Item Name: 205 Skidtube bent detail



Start Date: 8/3/2011

Required Date: 8/10/2011

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP B01.11.08 Revised Step 9, 10, 12, and 13 SM 10.12.01 as per DEO D1 DD verf:ec IPP Rev:C

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-190  Ext'n - 1' Beam Tube 4"		Manufactured	No			100	Each	41.0000	1	2			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				41					
					66296			41					
D2596  Web, 205 Skidtube		Manufactured	No			100	Each	0.0000	1	2			

~~72958~~  
~~72958~~ x 2

72958 x 2

SAD 11-08-17  
②  
SAD 11-08-17

W/O:		WORK ORDER CHANGES					
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**NOTE:** Date & initial all entries





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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. 0 SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07.06.28 *[Signature]*

**DEO ATTACHED**  
**UNDER REVIEW**

*P1110670*  
RMV *P11.06.70*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

SHOP COPY  
RETURN TO  
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UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *P11-08-3*

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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**NOTE:** Date & initial all entries

Diagram illustrating the grinding locations on a propeller cross-section:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576

RELEASED  
07-06-28

Rmv 4/11/06 30

DETAIL C

SCALE 5:24

#0.208  
D2855 CAP  
INSTALLATION (2 PLACES)

SEAL WITH  
SIKAFLEX-241/-291

AN3-5A BOLT (1)  
AN960JD1DL WASHER (1)  
(2 PLACES)

D2855 CAP

0.40

**SECTION D-D**  
SCALE 5:24

Diagram of a circular web assembly. Labels include: D2579 SPACER, D2598 WEB (REF), and AL57-1032-130 (REF) (TYP 50 PLACES). A note indicates: AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C-BORE D2579 SPACER TO #0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

**D2580-1 DRILLING DETAIL**

OP 11.05

37.50  
DISTANCE TO AFT END  
OF  
D2586 WEB

3  
7

1.750

1.750

0.508 (TYP.)  
(40 PLACES)

REFER TO DETAIL A

8.750

17.375

26.000

34.188

57.313 (REF)  
7 EQUAL SPACES  
8.188 PITCH

38.0

91.500

190.0  
(D2580-1)

REFER TO DETAIL A

WELD AS PER DETAIL B

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

0.5

1.5

1.5

D

P

P

P

P

P

P

P

REFER TO DETAIL C

03566-1

03566-5

03566-1

03566-13

03564-11

03564-5

03564-9

03564-13

AN3C4A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. 0 SHEET 2 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY SCALE 1:24	

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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**NOTE:** Date & initial all entries

CP 11.06.30  
RMV CP 11.06.30

Diagram illustrating the grinding locations and features for the D2576-3 step:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576

RELEASED  
07-06-28

**DETAIL G**  
SCALE 5:24

Technical drawing of a circular component with a central hole and a rectangular slot. The drawing includes the following labels and dimensions:

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)**: Points to two small circles on the top edge of the component.
- Ø0.208**: Dimension for the diameter of the two small circles.
- SEAL WITH SIKAFLEX-241/-291**: Points to the rectangular slot.
- AN3-5A BOLT (1)**: Points to a bolt passing through the central hole.
- AN980JD10L WASHER (1)**: Points to a washer under the bolt head.
- (2 PLACES)**: Points to the two small circles on the top edge.
- D2855 CAP**: Points to the central hole.
- SEE NOTE ii)**: Points to the rectangular slot.
- 0.40**: Dimension for the width of the rectangular slot.

Diagram of a circular web assembly. Labels include: D2579 SPACER, D2596 WEB (REF), and AL57-1032-130 (REF) (TYP 50 PLACES). A note indicates: AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY. A list of instructions follows: 1. CHAMFER HOLE 0.050 x 45°, 2. INSERT D2579 SPACER (20 PLACES), 3. WELD INTO PLACE AND GRIND FLUSH, 4. C'BORE D2579 SPACER TO #0.437 x 1.00 DEEP.

5

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE  
WITH THE SPACER AT THIS LOCATION

This diagram shows the elevation view of the bridge deck. Key features include:

- Top Reinforcement:** #0.508 (TYP.) bars at 40 PLACES.
- Bottom Reinforcement:** 7 EQUAL SPACES at 8.188 PITCH.
- Dimensions:**
  - Total length: 91.500
  - Distance from left end to first stirrup: 38.0
  - Stirrup spacing: 8.750
  - Distance between stirrups: 17.375
  - Distance from last stirrup to right end: 57.313 (REF)
  - Overall width: 37.50
  - Web thickness: 1.750
- Labels:** "REFER TO DETAIL A" points to the first stirrup location, and "REFER TO DETAIL E" points to the top reinforcement area.
- Notes:** "DISTANCE TO AFT END OF D2586 WEB" and "(D2500-1)" are included.

WELD AS PER DETAIL F

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

0.5

1.5

1.5

H

NO C'BORE NO PLUG

REFER TO DETAIL C

NO C'BORE NO PLUG

P P P P P P P P

H

NO C'BORE NO PLUG

D3566-1

D3566-5

D3566-1

D3566-13

D3564-11

D3564-5

D3564-9

D3564-13

AN3C4A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

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DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY		SCALE 1:24

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